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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LE, LANA N	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/784,132	SALFELNER, ANTON	
	Examiner	Art Unit	
	Lana N. Le	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 17-22* is/are rejected.

7)☒ Claim(s) *15 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 22 is objected to because of the following informalities: in line 9, before "converted", "to" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8-12, 17, and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergveld et al (US 6,298,222).

Regarding claim 1, Bergveld et al disclose a circuit arrangement (figs. 1-3) for transmitting and receiving radio signals, comprising:

an amplification device (4) including an output terminal (5) for transmitting signals, and a supply terminal (terminal 6); and

an antenna (13) for transmitting and receiving signals, the antenna (13) connected to the output of the amplification device (4) (col 2, lines 40-52);

wherein the output terminal (5) of the amplification device (4) is an input terminal (input 15) for a signal received via the antenna (13), wherein the amplification device (4) is for configured to convert the signal received via the antenna (13) into a converted

signal (via 4), and further configured to provide the converted signal (at output 5) at the supply terminal thereof (to 23 and 7) (col 2, lines 48-67).

Regarding claim 8, Bergveld et al disclose circuit arrangement of claim 1, wherein the converted signal is a modulated supply current (output power of 4 is output by controlling supply current/supply voltage of amplifier (4) (col 2, lines 43-47).

Regarding claim 9, Bergveld et al disclose circuit arrangement of claim 8, including a device (11) coupled to the supply terminal (9, 29) configured to detect and demodulate the converted signal (col 3, lines 8-11).

Regarding claim 10, Bergveld et al disclose circuit arrangement of claim 1, wherein the converted signal is a modulated voltage drop on the supply terminal (by controlling the supply voltage of amplifier 4 to drop on supply terminal 9, 29 via 25).

Regarding claim 11, Bergveld et al disclose circuit arrangement of claim 10, including a device (11) coupled to the supply terminal (9, 29) configured to detect and demodulate the converted signal (col 3, lines 8-11).

Regarding claim 12, Bergveld et al disclose circuit arrangement of claim 1, including a device (11) coupled to the supply terminal (9, 29) configured to detect and demodulate the converted signal (col 3, lines 8-11).

Regarding claim 17, Bergveld et al disclose circuit arrangement of claim 1, operable for transmitting and receiving radio signals nonsimultaneously (where the power command from the base station does not need to be received at the same time the power amplifier output a transmission signal; col 3, lines 11-18).

Regarding claim 22, Bergveld et al disclose a transceiver arrangement (figs. 1-3) comprising:

an amplifier (4) comprising an output terminal (5) and a supply terminal (6) configured to receive a supply voltage (via 7);

an antenna (13) configured to transmit and receive signals, wherein the antenna is connected (via 11) to the output terminal (5) of the amplifier (4); and

a demodulator (11) with an input terminal (12) configured to demodulate a signal provided at the input terminal (12) thereof (col 3, lines 8-11), wherein the input terminal (12) of the demodulator (11) is coupled (via 25 and 7) to the supply terminal (6) of the amplifier (4), and wherein the amplifier (4) is configured to convert a signal received at the antenna (13) and provide at its output terminal (5) a converted signal, and provide the converted signal (via 23) onto the supply signal at the supply terminal (9, 29) thereof.

Regarding claim 23, Bergveld et al disclose the transceiver arrangement of claim 22, further comprising a filter (within 11) configured to suppress a DC-portion of the converted signal (output signal at 5), wherein the filter (11) is arranged between the input terminal of the demodulator (within 11) and the supply terminal (6) of the amplifier (4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Bartlett (US 6,232,841).

Regarding claim 2, Bergveld et al disclose the circuit arrangement of claim 1, wherein the amplification device includes a supercritical power amplifier in a C-E mode of operation. Bergveld et al does not disclose the amplification device includes a supercritical power amplifier in a C-E mode of operation. Bartlett discloses a circuit where the amplification device includes a supercritical power amplifier in a C-E mode of operation (col 2, lines 25-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the PA in a C-E mode in order to provide high Q to keep output filtering to a minimum and the frequency agility for broad bandwidth as suggested by Bartlett.

Regarding claim 3, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein Bergveld et al disclose the circuit arrangement including a device (11) coupled to the supply terminal (9, 29) for detecting and demodulating the converted signal (col 3, lines 8-11).

Regarding claim 4, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein Bergveld et al disclose the converted signal is a modulated supply current (output power of 4 is output by controlling supply current/supply voltage of amplifier 4; col 2, lines 43-47).

Regarding claim 5, Bergveld et al and Bartlett disclose the circuit arrangement of

claim 4, including a device (11) coupled to the supply terminal (9, 29) configured to detect and demodulate the converted signal (col 3, lines 8-11).

Regarding claim 6, Bergveld et al and Bartlett disclose the circuit arrangement of claim 2, wherein the converted signal is a modulated voltage drop on the supply terminal (by controlling the supply voltage of amplifier 4 to drop on supply terminal (9, 29).

Regarding claim 7, Bergveld et al and Bartlett disclose the circuit arrangement of claim 6, including a device (11) coupled to the supply terminal (9, 29) configured to detect and demodulate the converted signal (col 3, lines 8-11).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Bruckert et al (US 6,094,428).

Regarding claim 13, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al do not disclose a transmission rate associated with symbols transmitted by the amplification device is different than a reception rate associated with symbols received by the amplification device. Bruckert et al disclose a transmission rate associated with symbols transmitted by the amplification device is different than a reception rate associated with symbols received by the amplification device (col 5, lines 12-29; col 6, lines 33-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the transmission rate be different than the reception rate in order to utilize continuous reverse channel transmission taking into account power control commands received from the base station (col 1, lines 55-63).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Tanji et al (US 6,943,618).

Regarding claim 14, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al do not disclose the circuit arrangement is provided as a transceiver of FSK-modulated data. Tanji et al disclose a circuit arrangement provided as a transceiver of FSK-modulated data (col 7, lines 14-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the amplifier of Bergveld be in a FSK transceiver in order to allow control of the power amplifier to transmit a signal at a relatively low power level to conserve system power as suggested by Tanji et al (col 7, lines 15-38).

8. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461).

Regarding claim 18, Bergveld et al disclose a method for frequency conversion in an amplification device (4; figs. 1-3) having a supply terminal (6) for a supply current, a signal input terminal (6) and a signal output supply terminal (5), comprising: applying a first signal to the signal input terminal (6) of the amplification device (4) with nondiminishing amplitude; applying a second signal to the signal output terminal (5) of the amplification device (4); and converting (via 4) the second signal at the signal output terminal (5) into a converted signal onto the supply terminal (9, 29). Bergveld et al do not disclose operating the amplification device in a supercritical range. Sterzer discloses operating the amplification device in a supercritical range (col 1, lines 55-69). It would have been obvious to one of ordinary skill in the art at the time the invention

was made to operate the amplifier in a supercritical range in order to amplify microwave signals at frequencies close to the transmit-time frequencies of the diode for stable linear amplification as suggested by Sterzer.

Regarding claim 21, Bergveld et al and Sterzer disclose the method of claim 18, wherein Bergveld et al disclose converting (via 4) the second signal into the supply current further comprises converting the second signal into a modulation of the supply current (modulating the signal before transmission via antenna 13).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461) and further in view of Sherwood (US 3,988,655).

Regarding claim 19, Bergveld et al and Sterzer disclose method of claim 18, wherein Bergveld et al and Sterzer do not disclose the method including monitoring the supply current over time to detect movement in a 3-dimensional area. Sherwood discloses a method of monitoring the supply current over time to detect movement in a 3-dimensional area (col 1, lines 44-52; col 2, lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to detect movement in a three dimensional space of the power supply in order to provide the necessary power supply current to drive a moving mechanism in a three dimensional space.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bergveld et al (US 6,298,222) in view of Sterzer (US 3,636,461) and further in view of Shimazaki et al (US 2002/0,045,995).

Regarding claim 20, Bergveld et al and Sterzer disclose method of claim 18,

wherein Bergveld et al and Sterzer do not disclose the method including monitoring the supply current over time to detect a change in an object over time. Shimazaki et al disclose a method including monitoring the supply current over time to detect a change in an object over time (para. 392). It would have been obvious to one of ordinary skill in the art at the time the invention was made to monitor the supply current over time to detect a change in an object over time in order monitor for electromagnetic interference and noise generated by the power supply as suggested by Shimazaki et al (para. 9, 390).

Allowable Subject Matter

11. Claims 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 15, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al and the cited prior art do not disclose the amplification device is for transmitting an outgoing signal via the antenna to an object whose reflection behavior changes over time, and wherein the amplification device is further for monitoring the converted signal during said transmission of the outgoing signal to detect a change in the object over time.

Regarding claim 16, Bergveld et al disclose circuit arrangement of claim 1, wherein Bergveld et al and the cited prior art do not disclose the amplification device is for transmitting an outgoing signal via the antenna into a spatially limited area, and

wherein the amplification device is further for monitoring the converted signal during said transmission of the outgoing signal to detect a change within the area over time.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lana N. Le
10-23-06
LANA LE
PRIMARY EXAMINER

Lana Le